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PATENT APPLICATION

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**AN ELECTRONIC SHOPPING SERVICE**

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This invention relates to electronic commerce. More specifically, this invention relates to electronic-transaction records, depositories for such records and the use of such records in subsequent  
10 electronic transactions.

A not atypical web-based shopping experience involves a consumer going to the website of a first merchant — a toy retailer, for example — to find and purchase a first item, then navigating to a second merchant — a big-box discount retailer, for example — to find and purchase a second item, etc. The consumer pays for the first item at the checkout page of the first merchant, for the second item at the checkout page of the second merchant and for subsequent items at the checkout pages of respective merchants.

The checkout “page” of a website, however, tends to be several pages long. The process of checking out can mean filling in forms on one page after another. Where the checkout page sequence is not particularly well implemented, a mistake on one page may require the consumer to re-enter not only the information entered improperly on a form but all information on the form — even the correctly entered information. The penalties for errors are multiplied where a consumer visits multiple websites in a shopping excursion.

Accordingly, the art seeks a shopping service that simplifies the shopping process for a consumer that shops at multiple websites.

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These and other goals of the invention will be readily apparent

to one of skill in the art on reading the background above and the description below.

### SUMMARY

5                   Herein are described apparatus and methods for an electronic shopping service. The service enables a consumer to select line items from electronic receipts and group them as a review list. The consumer may create groups of people to have access to the review list and may assign access permissions to each of the review groups.

10                   A member of a review group may review the items in a review list and comment on the items. The comments may be directed to the consumer or to other members of the review group. The review may be off-line or on-line, as in a chat session or telephone or audiovisual conference.

15                   The consumer or a review-group member may order on-line any of the items listed in a review list. The consumer or a review-group member may add products from e-commerce sites to the review list (if so authorized).

20                   The shopping service handles the ordering. Where the items to be purchased are from multiple e-commercial sites, the shopping service places multiple orders as necessary, with shipping and payment as directed by the consumer.

                    The shopping service may enable the consumer or a review-group member to match items from a review list for comparison. The comparison may be visual, cost-wise, etc.

25                   The service may enable a consumer to upload data to use in the item comparison. Such data may include images of the consumer or of his belongings, for example.

## BRIEF DESCRIPTION OF THE DRAWINGS

**Figure 1** is a diagram illustrating an electronic shopping system incorporating one embodiment of the invention.

5           **Figure 2** schematically illustrates the SSP of **Figure 1**, according to one embodiment of the invention.

**Figure 3** illustrates the process a shopping-service provider may follow to enable product review.

10           **Figures 4A - 4B** and **5A - 5B** illustrate parallel processes that a consumer and an e-merchant may respectively perform.

**Figures 6A - 6B** and **7A - 7B** illustrate parallel processes that a consumer and an electronic shopping system may respectively perform.

15           **Figures 8** and **9** illustrate parallel processes that a consumer and a shopping-service provider may respectively follow to enable product ordering.

## DESCRIPTION OF SPECIFIC EMBODIMENTS

### OVERVIEW

**Figure 1** is a diagram illustrating an electronic shopping system **100** incorporating one embodiment of the invention. The system **100** includes one or more e-merchants **120**, one or more data farms **140**, one or more shopping-service providers (SSPs) **150**, one or more personal computers **190** and optional application service providers (ASPs) **1A0**. The system **100** also includes a communications links **180**.

The communications link **180** communicatively interconnects the e-merchants **120**, data farms **140**, SSPs **150**, personal computers **190** and ASPs **1A0**. Where the link **180** is an internet, the e-merchants **120**, data farms **140**, personal computers **190** and ASPs are each a host on the internet **180**, allowing any one to communicate with any other one through that internet **180**. (Any number of these "hosts" may be only nominally so, their actual status more likely to depend on the directness of their connection to that internet **180** - through optional service providers not shown, for example.)

An e-merchant **120** may be a retail website on the world-wide web. Using conventional web and internet protocols, a consumer at a personal (or other) computer **190** transacts business at an e-merchant **120**. The consumer typically thereby creates a record of that transaction.

A data farm **140** provides an electronic-receipts repository for receiving and storing that transaction record. The data farm may provide an electronic-receipts service for manipulating that transaction record, including retrieving and forwarding it on demand.

The optional application providers **1A0** support the transactions of an e-merchant **120**. For example, an ASP **1A0** may verify credit or debit cards or may authorize credit- or debit-card transactions.

A shopping-service provider (SSP) **150** cooperates with e-merchants **120**, data farms **140** and computers **190** to provide shopping

services described herein. **Figure 3** illustrates the process an SSP **150** may follow to enable product review.

For example, under direction of a consumer at a computer **190**, the SSP**150** may retrieve some of the consumer's transaction records from data farms **140**, **step 310**, and enable the consumer to select line items from those transaction records, **step 320**, thereby creating a review list, **step 330**. The SSP **150** may also enable the consumer to identify a group of other consumers who may access — and even modify — his list.

**Figure 2** schematically illustrates an SSP **150**, according to one embodiment of the invention. The SSP **150** may include one or more of the following: a central processing unit ("CPU") **151**, a memory **152**, a user interface **153**, a port **154**, a communications interface **155** and an internal bus **156**. The bus **156** communicatively connects the CPU **151**, the memory **152**, the user interface **153**, the port **154** and the communications interface **155**.

(Of course, in an embedded system, some of these components may be missing, as is well understood in the art of embedded systems. In a distributed computing environment, some of these components may be on separate physical machines, as is well understood in the art of distributed computing.)

The memory **152** includes high-speed, volatile random-access memory (RAM) **1522**, as well as non-volatile memory such as read-only memory (ROM) **1521** and magnetic disk drives. Further, the memory **152** contains software **1523**. The software **1523** is layered: Application software **15231** communicates with the operating system **15232**, and the operating system **15232** communicates with its I/O subsystem **152321**. The I/O subsystem **152321** communicates with the CPU **151**, the user interface **153** and the communications interface **155** by means of the communications bus **156**.

The memory **152** may be programmed according to the shopping services described herein. Likewise, where the e-merchant **120**,

the data farm **140**, the computer **190** or ASP **1A0** is (fully or partially) implemented by a computer system, the memory of that computer system may be programmed according to the shopping services described herein.

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An e-merchant **120** may be a retail website on the world-wide web. The hardware and software enabling an e-merchant are notorious in the art and not described herein. The e-merchant **120** includes a shopping-service software client **121**, corresponding to and cooperating with an SSP **150**.

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A data farm **140** may be an electronic-receipts repository, along with an electronic-receipts service. Scott et al., U.S. Patent Application No. 09/480,883, entitled, "An Electronic-Receipts Service," filed January 10, 2000, with Attorney Docket No. A-65188-1/MAK/LM and commonly assigned to ReceiptCity.com, San Jose, California, describes one such electronic-receipts repository and service. (Scott et al. is incorporated herein by reference.) The website www.ReceiptCity.com, made available by the assignee of the instant application, is another example of an electronic-receipts repository and service.

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A computer **190** may include a web browser **191** or other software **191** for communicating with the e-merchants **120**, data farms **140** and SSPs **150** over the link **180**. The software **191** may include an SSP client **192** and an electronic-receipts-service client **193**.

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## **SHOPPING SERVICES**

### **— Multi-merchant Purchasing**

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In one embodiment, once e-merchants **120α** have each installed a shopping-service client **121**, a consumer may navigate to the website of a first e-merchant **120α**, **step 410**. **Figures 4A - 4B** and **5A - 5B** illustrate parallel processes that a consumer and an e-merchant may respectively perform.

The consumer may peruse that e-merchant **120a**'s goods and select one or more for purchase, **step 420**. The e-merchant **120a** may offer the consumer the option of continuing to shop at this e-merchant site **120a**, **step 520**, proceeding to checkout (including paying for the selected goods at this e-merchant site **120a**), **step 540**, or continuing to shop — but at another e-merchant site **120b** — and paying for goods selected at this e-merchant site **120a** at the other e-merchant site **120b**, **steps 5D0** through **5H0**.

The first option is currently available and well known in the art of web retailing. Accordingly, the option of continuing to shop at the current e-merchant **120a** is not described further herein.

Regarding the second option, along the way to payment, the e-merchant **120a** may ask the consumer whether a shopping service **150** currently holds other items to be purchased, **step 560**. If the consumer answers in the negative, **step 570**, the SSP **150** may check out the consumer in the conventional manner — without further reference to the shopping service **150**, **step 580**. This check-out procedure is also well known in the art of web retailing and is not described further herein.

If the consumer answers in the positive, **step 570**, the e-merchant **120a** may query the consumer for his shopping-service identity and, possibly, an authenticator (a user identifier and corresponding password, for example), **step 590**. The e-merchant **120a** (more precisely, the e-merchant SSP client **121**) may then query the SSP **150** to verify the user identifier and authenticate the consumer's right to access that user's account, **step 5A0**. On verification and authentication, the e-merchant **120a** may transfer line-item information as necessary to the SSP **150**, **step 60** (for the SSP **150** later to order the consumer-selected goods on the e-merchant **120a** or for the SSP **150** later to get more information about any of the consumer-selected goods from the e-merchant **120a**, for example). The e-merchant **120a** transfers the shopper to the SSP **150**, **step 5C0**. The SSP **150** may complete the check out of the consumer, including the goods



selected from the first and any other e-merchants **120** .

(In an alternate embodiment, the SSP client **121** of an e-merchant **120** may be sufficiently intelligent to receive line-item information from the SSP **150** and to check out the consumer using the  
5 resources of the e-merchant **120** rather than those of the SSP **150**.)

If, however, the consumer chooses the option of continuing to shop at a different e-merchant **120b**, **step 550**, the e-merchant **120a** may ask for a shopping-service identity and, possibly, an authenticator, **step 5D0**. The e-merchant **120** may then query the SSP **150** to verify the user identity  
10 and authenticate the consumer's right to access that user's account, **step 5E0**. On verification and authentication, the e-merchant **120** may transmit line-item information for the selected e-merchant **120a** goods to the SSP **150**, **step 5F0**. On successful transmission, the SSP **150** may inform the consumer that the SSP **150** has the selected-goods line-item information  
15 and that the SSP **150** or any merchant **120a** will check out the consumer at the end of his shopping, **step 5G0**. The consumer may then navigate (including being referred) to the second e-merchant **120b** website, **step 5H0**.

Alternatively, the consumer may directly log on to an SSP **150**,  
20 **step 610**, providing his shopping-service identity. (**Figures 6A - 6B** and **7A - 7B** illustrate parallel processes that a consumer and an electronic shopping system may respectively perform. ) From there, the consumer may navigate to the first e-merchant **120a**'s website, **step 620**, select goods for purchase, **step 4B30**, opt to continue shopping at a second e-merchant  
25 **120b**, **step 640**, navigate to that second e-merchant **120**'s website, **step 650**, and select goods at the e-merchant **120b** website for purchase, **step 660**. In this alternative scenario, the consumer may navigate from e-merchant **120** to e-merchant **120** without re-entering a shopping-service identifier and corresponding authenticator. The SSP **150** may provide this information on  
30 referring the consumer to the first merchant **120a**, **step 620**. The SSP **150** or the e-merchant **120a** may provide the information on referring the

consumer to the second e-merchant **120b**, **step 630** or **step 5H0**.

On either approach to the second e-merchant **120b** website, on check out, the second e-merchant **120b** website offers the consumer the same options as did the first: continuing to shop at this e-merchant site  
5 **120b**, **step 520** or **step 720**, proceeding to checkout from this e-merchant site **120b**, **step 540** or **step 740**, or continuing to shop at another e-merchant site **120α**, paying for the selected goods at this other e-merchant site **120α**.

Where the e-merchant **120** knows the consumer's shopping-service identifier and corresponding authenticator, it need not query the  
10 user about what information the SSP **150** is maintaining on behalf of the consumer. The knowledgeable e-merchant **120** may query the SSP **150** directly for that information, **step 760**, or the SSP **150** may have transferred that information (along with the service identifier, for example) when  
15 referring the consumer. On learning that the SSP **150** holds information regarding goods selected from other e-merchants **120α**, the e-merchant **120b** transfers line-item information as necessary to the SSP **150**, **step 7B0**. The e-merchant **120** transfers the shopper to the SSP **150**, **step 7C0**. The SSP **150** completes the check out of the consumer, including the goods  
20 selected from the first and second e-merchants **120**.

Where the SSP **150** does not hold information regarding goods selected from another e-merchant **120α**, the e-merchant **120b** may itself complete the check out of the consumer, **step 780**.

## 25 — Product Review

Once an e-merchant **120α** has installed an electronic-receipts-service client **122**, a consumer may navigate to a website **120α** and purchase goods from that website **120α**. The e-merchant **120α** may forward a record of that transaction to an electronic-records service **140**.  
30 Alternatively, a consumer may direct the SSP **150** to retrieve that transaction record for manipulation on the SSP **150** as described herein.



and one or more review lists.

The SSP **150** may offer for purchase items related to items on a transaction record, review list or purchase list, **step 910**. For example, where a transaction record lists a portable MP3 player, the SSP **150** may offer to  
5 include on a purchase list batteries, upgrade headphones or expansion memory for that particular MP3 player — even though or because these items may not have appeared on the transaction record. Likewise, where a transaction record includes a Mattel Corp. Barbie® doll, the SSP **150** may offer any or all of the accessories for that particular model of Barbie® doll.  
10 The SSP **150** may offer a companion product (the Ken doll, for example), a product from the same company (Learning Company software, for example) or a product from a partnership, alliance or otherwise affiliated company, etc.

The consumer may indicate to the SSP **150** that he has  
15 completed his purchase list and submit that purchase list to the SSP **150**, **step 840**. On behalf of the consumer, the SSP **150** then places one or more orders with the one or e-merchants selling the corresponding items on the purchase list, **step 950**. The payment method may be identical for all of the orders or may vary across the orders, at the consumer's discretion. The  
20 order(s) may be placed immediately, or all or some may be deferred, again at the consumer's discretion.

#### — Product Comparison

Given an item in a transaction record, review list or purchase  
25 list, the shopping service may offer one or more substitute goods to the consumer for purchase, **step 920**. The shopping service may offer substitutes unbidden or at the direction of the consumer.

The substitute item may be from the same manufacturer but, for example, an upgrade or downgrade model. The substitute item may  
30 be from a competing manufacturer.

The shopping service may offer samples of the substitute item

and of the original item, permitting a comparison of the two, **step 920**. The samples may be images, sounds, smells, etc.

An SSP user may himself provide a sample against which a potential purchase may be compared, **step 925**. The consumer may  
 5 upload an image of their body, car interior, living room, etc. This enables, for example, the consumer to test products like clothes, hats, sunglasses and shoes with the virtual body, seat covers with the virtual car interior and wall papers with the virtual living room. The shopping service may permit samples of the original and substitute items to be presented simultaneously  
 10 and, where appropriate, side by side.

For a sophisticated system for presenting virtual products, see Bunn et al., U.S. Patent Application No. 09/615,363, entitled, "A Virtual-Product Presentation System," filed July 13, 2000, with Attorney Docket No. A-68295/MAK/LM, and assigned to @POS.COM, INC., San Jose, California.  
 15 Bunn et al., U.S. Patent Application No. 09/615,363 is incorporated herein by reference.

The shopping service may compare the line item to other similar items based on price, **step 920**. Indeed, the shopping service may aggregate orders from multiple consumers for a given item in order to  
 20 create a bulk order and thereby receive a discount for the items, **step 950**. The service may not pass on the entire discount to the consumers.

Indeed, the invention now being fully described, many changes and modifications that can be made thereto without departing  
 25 from the spirit or scope of the appended claims will be apparent to one of ordinary skill in the art. For example, the electronic-receipts service **140** and the SSP **150** may, of course, be combined into one service.

As another example, the consumer may add items to his purchase list that were not in a transaction record or review list and not  
 30 offered by the SSP **150**, **step 930**. A consumer may add items to a review list where the creator of the review list has given him that permission (or he

himself is the creator), **step 350**.

As still another example, the service may provide advertisements, promotions, surveys coupons and other marketing material to the SSP client **192** for display on a consumer's computer **190**. The service  
5 may target the marketing material to the particular consumer.

This specification incorporates by reference all publications and patent applications mentioned herein, to the same extent if the specification had specifically and individually incorporated by reference  
10 each such individual publication or patent application.

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